NUCLEAR DIVISION NEWS

UNION CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

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Thursday, July 22, 1971

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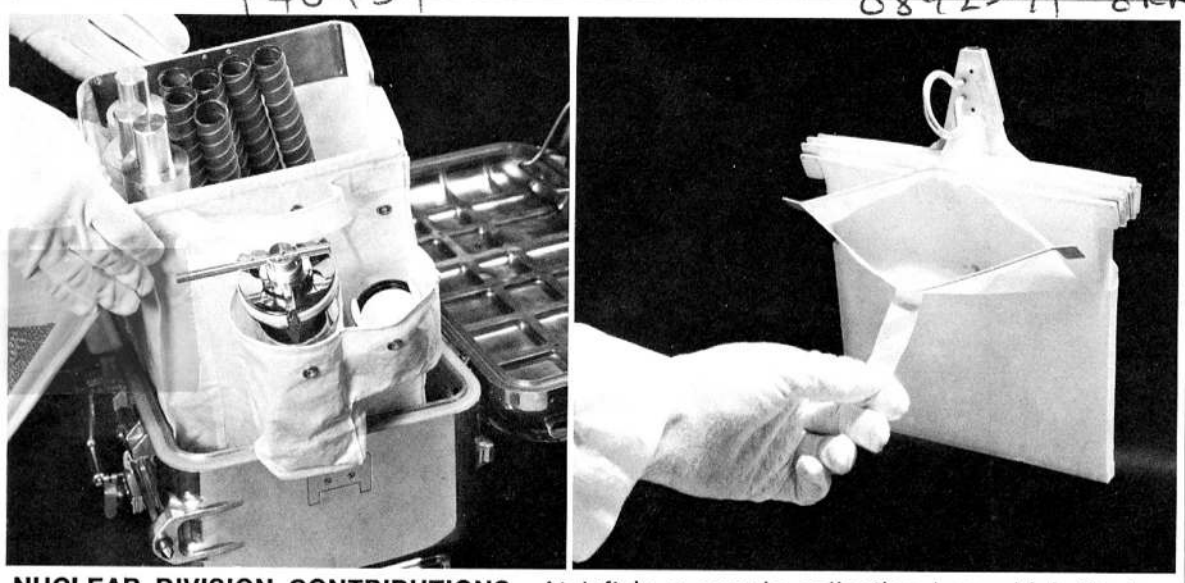

NUCLEAR DIVISION CONTRIBUTIONS—At left is a sample collection bag which fits inside the 'moonbox' to serve as the stowage bag for auxiliary equipment for the voyage to the moon and as the protective covering for lunar samples on the return to earth. Seen inside the bag are two types of core tubes to be used in obtaining layer samples of lunar sediments. The outside pockets hold the special environmental sample container and a dispenser for tube caps. At right is a documented sample bag dispenser, consisting of a dispenser bag pocket filled with 20 sample bags. Each bag is numbered to aid in recording locations where specimens are taken from the lunar surface.

AARP Chapter Sponsors Varied Summer Activities

The Oak Ridge Chapter of the American Association for Retired Persons is busy during the summer. The second anniversary party held recently had 164 members and guests attending.

A total of 32 members took the defensive driving course.

Two upcoming events were noted: On August 19 a picnic will be held at the Clark Center Recreation Park, beginning at 1 p.m. Each member is to bring a covered dish plus coffee and other drinks. Special entertainment will be provided. An overnight trip is planned for August 21 and 22 to Nashville to visit the Parthenon, the Hermitage and the Grand Ole Opry. A special highlight of the trip will be a visit to Cheekwood, the 60-room Georgian mansion, now occupied by the Tennessee Botanical Gardens.

Special summer bowling is also still in effect. Just show up at Ark Bowling Lanes at 10 a.m. each Tuesday.

Astronauts on Apollo-15 Will Take Several Items from Here on Flight

Apollo-15 astronauts will be using two new items of geological sample collecting equipment designed and fabricated by personnel of the Oak Ridge Y-12 Plant and Oak Ridge National Laboratory.

The new items are a sample collection bag and a documented sample bag dispenser. Both are fabricated of a Teflon-laminated material developed specifically for the National Aeronautics and Space Administration's Apollo program. The heat-resistant material is similar to a heavy oilcloth.

The sample collection bag, rectangular in shape with a top band of stainless steel, fits inside the "moonbox" to serve as the stowage bag for auxiliary sample equipment for the voyage to the moon and as the protective covering for lunar samples on the return to earth. It has straps on the side to facilitate handling and is equipped with pockets to hold such items as core tubes, tube caps and the special environmental sample container.

The documented sample bag dispenser consists of a dispenser bag pocket filled with 20 sample bags. Each bag is numbered to aid in recording locations where specimens are taken from the lunar surface. When the bags are filled, they will be placed inside the sample collection bag for the return trip to earth.

Representing the Nuclear Division at the Manned Spacecraft Center in Houston during the Apollo-15 mission (set to blast-off next week) will be E. A. Larson of Y-12 and C. A. Hahs of ORNL.

DUPLICATE MAILING

Several employees stated they received more than one copy of **Nuclear Division News.** This is due to intra-plant mailing lists. Just telephone your mail room and have them remove one of your names.

140652

PROFESSORS VISIT OAK RIDGE—Representatives from predominantly Negro colleges visited Oak Ridge recently to coordinate the pre-cooperative students' activities here and at Paducah. The pre-coop program is now in its second year. From left are Paul Parker, North Carolina A & T University; George Howard, III, Tuskegee University; George Ferguson, Howard University; Roger F. Hibbs, president of the Nuclear Division; and Isaac Porche, Jr., Southern University.

Nuclear Division Scientists Set Papers for Geneva Meeting

Ten ORNL scientists are among 59 Americans who have been selected to present papers at the Fourth United Nations International Conference on the Peaceful Uses of Atomic Energy to be held September 6-16 in Geneva, Switzerland.

The Oak Ridge delegation will join AEC Chairman Dr. Glenn Seaborg, three AEC commissioners and other representatives of government and industry in presenting papers on the environmental, sociological and technological aspects of nuclear energy.

Seaborg to Speak

Chairman Seaborg, who has been named by the United Nations as president of the 1971 conference, will speak on "Recent Advances in the United States on the Transuranium Elements." Commissioner James T. Ramey will discuss "Nuclear Power for Desalination and Agro-Industrial Complexes," and Commissioner Clarence E. Larson will speak on "The Energy/Environment Equation." Commissioner Wilfrid E. Johnson will present a paper on "Uranium Isotope Enrichment," which was co-authored by S. R. Sapirie, Manager of the AEC's Oak Ridge Operations.

The conference is expected to attract more than 2,500 leaders from 70 nations and unlike previous conferences will cover topics of interest to economists, government planners and other nontechnical executives as well as to nuclear scientists. Special emphasis will be given to applications of atomic energy of interest to developing nations.

Approximately 500 papers will be presented at the conference with one-half of the presentations concerning the generation of electricity by nuclear energy. The papers were selected by the Scientific Secretariat of the Conference which is headed by Dr. Sigvard Eklund, Director General of the International Atomic Energy Agency.

ORNL Attendees

Following are the Oak Ridge representatives to the conference and the topics they will discuss:

Alvin M. Weinberg, "Global Effects of Increased Use of Energy"; Stanley I. Auerbach, "Understanding the Dynamic Behavior of Radionuclides Released to the Environment and Implications"; Floyd L. Culler, "Current Developments in Long Term Radioactive Waste Management"; Don E. Ferguson, "Recovery of LMFBR Fuels: Development and Techniques"; A. L. Lotts, "The Status of Thermal Reactor Fuel Manufacture in the United States"; Royes Salmon, "Price Forecasting and Resource Utilization for the Fuel Cycle Industry of the United States"; Arthur H. Snell, "Research Experience with the High Flux Isotope Reactor (HFIR) and the High-Flux Beam Reactor (HFBR)"; Dr. John B. Storer, "Evaluation of Long Term Effects of Low Level Whole Body External Radiation Exposures"; Murray W. Rosenthal, "Advances in the Development of Molten-Salt Breeder Reactors"; William L. Russell, "The Genetic Effects of Radiation."

Roberto de Jesus Toro Named Director

Roberto de Jesus Toro, president of Banco de Ponce, Ponce, Puerto Rico, has been elected a director of Union Carbide Corporation.

Sr. de Jesus's career covers both private banking and public service in the Commonwealth of Puerto Rico. He served as director of the bureau of budget of the Commonwealth from July, 1945, through October, 1951; was vice president of the Government Development Bank of Puerto Rico from November, 1951, to August 15, 1954; joined Banco de Ponce as executive vice president in August, 1954; and was elected president on March 31, 1959.

Sr. de Jesus serves on the board of directors of the Banco de Ponce, Puerto Rican Cement Company, Inc., Puerto Rican-American Insurance Company, Union Carbide Caribe Inc., and is a member of the Governor's Advisory Council and the vice chairman of the Council of Higher Education of the University of Puerto Rico.

Union Carbide has major producing locations in Puerto Rico—at Barceloneta for food casings, at Yabucoa for graphite electrodes, and at Penuelas, where Union Carbide established the first petrochemical plant in the Commonwealth in 1959 and where Union Carbide Caribe Inc. is completing a major new petrochemical complex, units of which will come on-stream beginning in late 1971.

The new director attended Wharton School of Finance and Commerce of the University of Pennsylvania, receiving a B.S. in economics in 1940 and a Master's degree in business administration in 1943. Sr. and Senora de Jesus have two sons and two daughters. They live in Ponce, Puerto Rico.

Enrollment in July

Only six more working days remain in July. Nuclear Division employees who have not enrolled in the Hospitalization, Special Medical or Major Medical Plan may do so during this month without having to furnish a statement of good health.

Also, if any employee wishes he may change his coverage from single to family to cover his dependents without having to furnish a statement of good health on them.

A notice has been mailed to employees at their home address, stating what coverage they now have. It also points out the July 31 deadline for signing up or changing coverage. Employees who are not covered by either single or family coverage receive a notice also, stating that they have no coverage.

Recording for Blind Provides Involvement for OR Employees

By James A. Young

Personal involvement is sort of like the weather . . . everybody talks about it, but few do anything about it. Several Nuclear Division men and women, however, are doing something about it in a very real sense. They are involved in the Recording for the Blind unit in Oak Ridge, working at least one and one-half hours a week so that others may have technical texts available to them.

They read or they monitor. And you don't have to be an Alexander Scourby or a Laurence Olivier to get involved in RFB activities. As a matter of fact, RFB prefers that you do not act or emote in reading. You speak in your own natural manner without affectation or stagecraft.

Readers Needed

Readers are especially needed in technical disciplines such as computing technology, mathematics, and, of course, all the natural sciences. Most of the records are for students in highly specialized fields of training.

Readers and monitors are scheduled for regular weekly sessions. Local RFB officials recommend a one and one-half session. You may practice at home reading to pace yourself for such intervals.

Recently, the Oak Ridge unit moved into its handsome new quarters, the Margaret Despres Weinberg Center. The new structure is on Badger Road near the Oak Ridge Art Center. Six booths are available for simultaneous recording. RFB recently became a statewide project of the Lions of Tennessee Multiple District 12 Lions International. The Lions Clubs are one of the major lifelines of support for the Oak Ridge Unit contributing about three-quarters of the operating budget.

The Oak Ridge unit is one of 23 studios in the United States where services are available free to visually and physically handicapped elementary, high school, college and graduate students, as well as adults who require educational material in their individual professions or vocations.

Priority Subjects

The enormous amount of reading required at the college and graduate level is rarely available in braille or recorded form and much of the specialized reading needed by adults in business or the professions — law, computing programming, education, for example — is also unavailable in these forms. Consequently, RFB usually assesses priorities to these subjects.

Look at these impressive figures: Last year RFB circulated 26,145 books to 4,148 borrowers including 1,550 elementary and high school students; 1,498 college and graduate students; and 1,100 adults.

The life force behind the Recording for the Blind is the volunteer, points out Mrs. Lilian Grigorieff, studio director of the Oak Ridge unit. Housewives, scientists, engineers, businessmen, computer specialists, mathematicians, and other specialists give freely of their time to produce recorded texts requested by individuals, schools or agencies.

First, after a request is received, the local unit checks with the RFB national headquarters in New York to make sure the work has not been taped at some prior time. After approval is received, the work is then put on schedule. The average textbook is about 25 recorded hours in length . . . so the services of a number of different monitors and readers are required to complete the book.

6-14026

CENTER'S MAIN DESK—The hub of activity around the Recording for the Blind unit is the main desk. Here records and schedules are kept. Director Lilian Grigorieff faces the camera in the center, Evelyn Hanig, assistant studio director is at the duplicator, and Eileen Neiler, unit chairman, is seen with her back to the camera. Reading in the booth is Madge Bottenfield, and her monitor is Elizabeth Hise Stickle.

6-14030

MODERN CENTER—The Margaret Despres Weinberg Center houses the Oak Ridge unit of the Recording for the Blind. RFB moved into this handsome new building early this year. The facilities are located on Badger Road, Oak Ridge, near the Oak Ridge Art Center.

Bulletins of newly completed titles are sent to all borrowers at intervals throughout the year.

Numerous Volunteers

Other volunteers perform important duties around the Center in Oak Ridge. They include library and clerical workers, and volunteers qualified to evaluate reading tests and to prepare instructions to readers on the recordin gof books, as well as volunteers who maintain the complex recording equipment.

Just what does a monitor do? He reads along with the reader to catch errors, help eradicate coughs or clearings of the throat that may naturally occur during a taping session. The monitor actually runs a quality control on the tape, as the book is being read.

Reading standards are, of necessity, high; the volunteer must pass a special reading test to qualify.

Recording for the Blind is only 20 years old this year, but its indelible mark on education through the nation has had its impact. Listen to the mother of a high school graduate, "Christine begins her freshman year at Smith starting in September. Thank you for your help during the past years. You have helped Christine become a National Merit Scholar and National Honor Society member, in addition to other awards."

The Oak Ridge unit was founded in 1952, just one year after Recording for the Blind became a national organization. For years the unit operated in cramped temporary quarters, reaching a maximum production rate of 3,144 reading hours.

Oak Ridge recorded tapes are sent to the Master Tape Library of RFB in New York, which holds 11,000 titles and circulates about 40,000 books per year. It is the largest circulating library of free recorded educational material for blind students.

Financial support in Oak Ridge comes entirely from individuals and from the generous support of the Lions Clubs of Tennessee. Memorial gifts are used to purchase much of the recording equipment.

For instance, RFB officials point out, $5 will provide tapes for 25 listening hours; $10 will buy materials used in producing two recorded books; $25 will purchase one dozen tapes; $50 provides the student's copy of a book and a master tape for the Central Library; $100 assures a blind student of textbooks for one class; and $600 purchases one tape recorder.

6-14028

PHYSICAL CHEMISTRY TEXT—Neil B. Schultz records a text on physical chemistry while Harold Mayberry monitors, and adjusts the tape recorder. Both Oak Ridge Gaseous Diffusion Plant employees are regular volunteers at RFB studios in Oak Ridge.

6-14023

ORNL STAFFERS INVOLVED—Martha Gerrard monitors Helen Warren reading a text for Recording for the Blind. Readers and monitors give at least one and one-half hours a week on a regular schedule to RFB.

★ ★ ★

RFB boosters in the Oak Ridge area have the organization, the experience, the will to help. Volunteers, especially during the summer months, are needed. To stop talking about involvement, and do something about it, just go by for a reading audition, or volunteer to help in clerical jobs (even outdoor workers are needed to help care for the grounds); or give RFB a phone call . . . on Oak Ridge telephone 482-3496.

Many Nuclear Division employees have stopped talking about involvement . . . they are **doing** something about it!

NUCLEAR DIVISION NEWS

UNION CARBIDE

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NUCLEAR DIVISION

JAMES A. YOUNG, *Editor* ..... EXT. 3-7100
MARTHA GOOLSBY, *Assoc. Editor* ..... EXT. 3-6421

— *Member* —
APPALACHIAN INDUSTRIAL EDITOR'S ASSOCIATION
INTERNATIONAL ASSOCIATION OF BUSINESS COMMUNICATORS

OFFICE
POST OFFICE BOX Y, OAK RIDGE, TENN. 37830

Engineering's Littleton Gets Degree From Tennessee after 17 Year Attempt

Seventeen years late . . . but better than you-know-what, says I. T. Littleton, Union Carbide Engineering Department in the Oak Ridge Y-12 Plant.

Littleton was describing his recent graduation from The University of Tennessee where he was awarded an M.B.A. degree with a major in industrial management. Actually, the engineer received a B.S. in business administration at UT in 1964, and holds a B.S. degree in marine engineering from the U. S. Merchant Marine Academy at Kings Point, N. Y.

Littleton, a native of Lenoir City, lives there now with his wife, the former Margaret Lawson. They have a son, Grayling, who attends Highland Park School.

He came with Union Carbide in 1954 after working with The Texas Company (now Texaco) in New York, N. Y.

All of the advanced degree work and the undergraduate work at UT were attained through benefits of Union Carbide's Education Assistance Program. Littleton was one of the first Union Carbide employees to enter the AEP back when it started.

I. T. Littleton

Parking Lot Changes Set At Y-12's Central Portal

Y-12ers who patronize the Central Portal parking lot will be interested in its upcoming remodeling.

Work is set to begin the first week in August to renovate the entire parking lot. Half of the work will be done, closing off that half; then the other half will be redone.

Since parking space is usually fully utilized, about 50 percent of present users will have to park elsewhere during the renovations. Extreme caution is requested by all those using Central Portal, as well as the others.

LOST AND FOUND

LOST: Signet pin, initials RMP . . . sentimental attachment.

For information concerning lost and found items, contact Guard Headquarters, 3-7272.

Benefit Report Mailed

All Nuclear Division employees by now have received the "Report of Benefits," which calculates the values of various benefits to Union Carbide employees.

The report included data on disability pay, retirement, life insurance, and other pertinent factors of vital interest.

If, by chance, you did not receive yours, contact your Insurance or Benefit Plans office. They will see that you get one promptly.

DEFINING CIVILIZATION

Civilization: a condition in which one generation pays the last generation's debts by issuing bonds for the next generation to pay.

140690

BEST GIFT OF ALL—Walter H. Stockig, center, who retired recently from Y-12's General Expediting and Auxiliary Services, received a gift of money from fellow workers. There's nothing unusual about that . . . it happens frequently when friends wish to give something to a retiring co-worker to show their esteem and respect. But the unusual part of Stockig's gift was that he didn't keep it. He turned right around and gave it to the Shriner's Crippled Childrens' Hospital, the entire amount. He didn't even bother to count it. Stockig was surprised to find that some fellow workers thought it a generous, magnanimous act. 'It was nothing,' he pointed out. 'I appreciated the thoughts of my fellow-workers, but did not need the money. It gave me pleasure to give it to the Crippled Children's Hospital.'

Company 20-25-30 Service

Congratulations to the following Y-12ers who mark important dates with Union Carbide Corporation.

25 YEARS

Harry P. Templeton, Jr., William J. Murphy, Mark D. Griffitts, Herschel L. Hixon and John W. Shipley, Jr.

20 YEARS

Albert H. Wilson, Agnes D. Gracey, Richard E. Sladky, Clon H. Felker, Jr., Lubirda T. Woods, Dexter N. Williams, James R. Ownby, Edna M. Buchanan, Bobby A. Cooper, Thomas E. Todd, Willie T. Wright, Marlin S. Dill and Thomas H. Barton, Jr.

Technical Papers From Y-12 Listed

Following is a list of unclassified Oak Ridge Y-12 Plant documents published April through June, 1971, which are publicly available through the National Technical Information Service in Washington, D. C. They are available to Nuclear Division personnel upon request to Y-12 Central Files, Building 9711-5.

Y-1734, "Thermal Degradation and Toxicity Aspects of Various Polymeric Materials," C. R. Schmitt.

Y-1755, "Correction of Inspection Data for Part Misalignment Utilizing a Small Computer," T. W. Bookhart, R. J. Easterday and W. Q. Walter.

Y-1756, "Purification of Boron Compounds by Pyrohydrolysis," C. R. Schmitt and R. K. Edwards.

Y-1758, "Aspects of the Brittle Fracture Failure of a 30-inch-ID, 30,000-psi Isostat with Threaded Closure," H. A. Pohto.

Y-1759, "Adaptive Control Survey," Metcut Research Associates (under sub-contract with Y-12).

Y-1783, "A Capacitance Gage for Dimensional Measurement," J. J. Henry.

Y-1785, "The Iron-Nickel-Tungsten Phase Diagram," F. R. Winslow.

Y-1786, "Fabrication of Carbon-Carbon Composites Using Electrostatic Fiber Deposition (Flocking)," F. Lambdin and J. L. Cook.

Y-1789, "The Accurate Determination of D(10) Spacings from Leed Photographic Measurements," C. E. Holcombe, Jr.

Y-1791, "A Practical Low-Range Moisture Generator," R. F. Wolny.

Y-1792, "Determination of Fluorine and Boron in Uranium-Hydrofluoboric Acid Solutions," L. D. Keele.

Y-DA-3741, "Residual Stress Analysis by X-Ray Diffraction (Analysis of Thin-Sheet Titanium Alloy)," W. E. Baucum.

Y-DA-4039, "Machining Optimization," L. A. Abbatiello, C. H. Thompson and R. L. Williams.

Y-SC-7, "Impregnation of Porous Graphite for Flow Modification," W. H. Rasnick and M. L. Shell.

Ride wanted from Edgemoor Road to North or East Portal, straight day. Glen Miller, plant phone 3-5851, home phone Claxton 945-2560.

Oak Ridge Y-12 Plant

Y-12 Plant Editor . . . . . James A. Young
extension 3-7100

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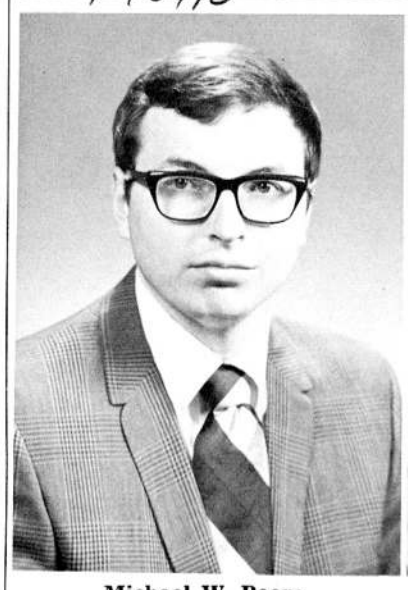

Michael W. Poore

James H. Smith

Y-12ers Poore and Smith Publish Computer Article

An article, written by two Y-12-ers, appeared in the May issue of **Instruments and Control Systems.** The treatise, entitled "Torsion Testing Using a Digital Computer," was written by Michael W. Poore and James H. Smith. Poore is in Y-12's Materials Testing Support and Smith is in Y-12's Nondestructive Testing.

Parts of the article appeared in Poore's report of July 17, 1970, Y-1731; and in Smith's article "Computers in Mechanical Testing," which appeared in the June, 1970, issue of **Instruments and Control Systems.**

The current article was illustrated with flow charts, showing the start of data throughout to the finished results.

"Information such as the specimen dimensions, torque range, strain range, and type of test are supplied to the computer prior to calculations along with additional information such as specimen identity, test temperature and material. These data are entered from the teletypewriter keyboard, a task which becomes surprisingly easy after the operator gains a little experience," the article points out. "Some data entry can be automated with hardware, but software control gives the system flexibility and makes modifications easier and less expensive."

Woodard Fry Is Victim Of Swimming Accident

Woodard W. Fry, Dimensional Inspection, drowned June 26 while on an outing with relatives and friends.

Mr. Fry came to Y-12 March 2, 1970, after a career in machining in Chicago, Toledo and Knoxville. He was a U. S. Navy veteran, serving from 1942 until 1948.

W. W. Fry

He was a native of Erwin, Tenn.

Survivors include his wife, at home at McHaffey Road, Powell; mother, Mrs. Bertie Mae Stephens, Pine Knott, Ky.; father, Joseph R. Fry, McHaffey Road; brother, Willard J. Fry, Knoxville; sisters, Mrs. Sylvia Johnson, Pine Knott, Ky.; Mrs. Mina Davis, Erwin; and grandmothers, Mrs. Hattie Sames, Elizabethton, and Mrs. Nancy Fry Pate, San Antonia, Calif.

Funeral services were held June 29 at Weaver's chapel, Knoxville. Interment followed in the National Cemetery.

Smith Graduates

June graduations from The University of Tennessee saw Y-12er, James H. Smith awarded a master's degree in physics.

Smith had previously graduated with a B.S. in mathematics and physics from Eastern Kentucky State College.

A native of Oneida, he served in the U. S. Navy from 1951 until 1955, coming with Union Carbide June 2, 1962. He had worked with American Telephone and Telegraph Co. and was an instructor at Eastern Kentucky State College before coming here.

Smith's thesis was entitled: "Energy Redistribution in an Ultrasonic Liquid - Solid Interface." He recently spoke on this subject at the 81st annual meeting of the American Acoustical Society, in Washington, D. C.

The Smiths live at 109 Ogden Lane, Oak Ridge. Mrs. Smith is the former Helen Louise Sharp. They have two children, Karen and Scott.

Smith took all of his graduate work with assistance from the Carbide Educational Assistance Program.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated

167 Days Or 6,551,000 Man-Hours

(Unofficial Estimate)

Through July 18

Without A Disabling Injury

SAFETY AT HOME, AT WORK, AT PLAY

Paducah Gaseous Diffusion Plant

Paducah Editor . . . . . Keith Bryant
extension 369

PERFECTLY PRESERVED—Nature preserved this mama snake in the Charles Turok home. After five years the well-preserved carcass was found nestled among some jars in the Turok basement. This was all that was left of a reptile study aimed at earning a scout merit badge.

'Scout Merit Badge' Reptile Makes Very Interesting Display at Turok Home

By Charles Turok

One evening late in April 1965, I was in my front yard surveying my one-sixth of an acre when I glanced up the street and noticed two lads approaching. It occurred to me that they were carrying their arms at an unnatural angle and their sleeveless arms appeared entwined with dark ropes. In a short time I recognized the two boys as my son Kim, and Rusty, one of his pals. As they walked onto the lawn, I almost unbelievingly recognized the ropes as snakes. Would you believe a large mother snake and her 18 young offsprings!

You might imagine the question I asked; however, their answers were clarifying. "We caught the snakes in a branch of Perkins Creek," said Kim, "and Dad, I'd like to keep the snakes so that I can earn a scout merit badge on reptile study."

This seemed like a good reason for a boy to have pet snakes so we sought a satisfactory container. We decided that the best available container was a plastic foam cooler. We placed the cooler on the back porch where it would have some shade and added a few inches of water and a rock large enough to extend above the waterline. This served the purpose very nicely except that the larger snake would go and come as she pleased, which led to some unpleasantness. A large cardboard container was obtained and the cooler placed inside. This was perfect.

Then it rained and the cardboard box collapsed. Snakes were all over the porch and back yard. Kim was able to catch only the mother and three of the young. After a family conference it was decided that we would keep the mother but dispose of the young. This made three of Kim's friends happy and three mothers unhappy.

The reptile study reached a successful conclusion, but Kim wanted to keep his pet. Her home had become a small wire cage which was satisfactory except that one day we found the cage open and Mrs. Snake gone. We searched the basement over but to no avail. Five years later we were cleaning out our basement storage room that we used for canned goods and other items, including our emergency water supply which is in 24 one-gallon glass jugs. In shuffling the water jugs we found our long lost snake nested between four jugs and draped over the shoulder of two of the jugs. The snake was amazingly well preserved, and even knowledgeable persons have been surprised at its condition.

If you are ever in the neighborhood of 336 Hilldale Road in Paducah, stop by and see her, she is always on display on our mantle.

Car Pool Charlie

What well known plant character described his job worries by saying, "Tain't the work, it's the stupidity"?

* * *

The reason some people pray is to try and shift responsibility.

* * *

How to Avoid Highway Accidents: Spend more money on Scotch and less on gasoline. Use up the latter item before you start on the first.

* * *

Summer is upon us. And lo it doth bring forth the period of casual dress for the boys of all ages. Going in, out, around the plant the close observer will note the open collar of the colored sport shirt, revealing stringy necks, long Adam's Apple, or splotches of sunburned skin. He will note the short sleeves, revealing scrawny forearms, and elbows with an eternal rust. He will note protruding stomachs that strain at the confining buttons of the shirt. These buttons resist manfully but not always successfully.

He will note the close fitting loud slacks and perforated or open-toed shoes. Both about as attractive as a dead mule.

And then he will mumble again his thanks to the fair sex and especially to the summer employees — for their colorful, cool attractive dresses—slacks, minis, and occasional hot pants. Without these it would indeed be a long hot summer.

Former Paducahan Is Promoted at Marietta

Fred Charles, manager of the Marietta plant, Ferroalloys Division, Union Carbide Corporation, has announced the promotion of J. D. Koetting to superintendent of operations of Electrolytic Manganese and Chromium.

Koetting, a graduate of the University of Missouri at Rolla, joined Union Carbide in January, 1952, at the Paducah Gaseous Diffusion Plant. He transferred to Marietta in July of 1969 as assistant superintendent of chemicals.

Koetting resides at 24 North Hills Drive, Parkersburg, with his wife Pat and five children.

WEEK-END HAZARDOUS

Almost 40 percent of all highway deaths occur on weekends—56 percent between 6 p.m. and 6 a.m. "Never on weekends' might be a driver motto worth observing.

Technical Scholar William D. Brickeen Graduates from UK with High Honors

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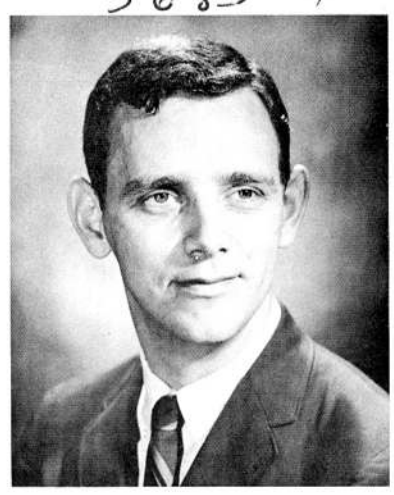


William D. Brickeen

William D. Brickeen, assigned to the plant architectural, civil, and structural section of the Plant Engineering Division, received his bachelor of science degree in civil engineering during Spring graduation ceremonies at the University of Kentucky. Brickeen studied under the Atomic Energy Commission Technical Scholarship Program. He was awarded one of four technical scholarships given by the USAEC in May, 1969, to employees of Union Carbide's Nuclear Division.

During participation in the program, he earned 68 semester hour credits with an overall grade index of 3.57. All four semesters and one summer session he was enrolled, he was named to the Dean's list.

In December, 1970, he passed the Engineering - in - Training examination and has applied to take the Professional Engineering Examination in December, to become a registered professional engineer in Kentucky.

Four years of acceptable experience after graduation from an approved engineering curriculum is the normal requirement for a professional engineer's license. The registration board has agreed to accept Brickeen's experience in engineering prior to graduation which will enable him to receive his license at an accelerated date, subject to successful completion of the examination.

In his senior year at UK, he was initiated into Chi Epsilon, the civil engineering honorary fraternity. Prospective memebers must achieve a scholastic average in the top one-third of his class.

Brickeen is also a student member of the American Society of Civil Engineers and will become an associate member in the near future.

On the Moon

Nuclear power is helping to provide a significant dimension to our quest for knowledge of the moon.

Two atomic batteries left by Apollo astronauts on the lunar surface — one in November 1969 and the second in February of this year — are powering two arrays of instruments about 110 miles apart. The batteries (radioisotope thermoelectric generators) are designated SNAP-27.

Both nuclear batteries are generating about 72 electrical watts of power, exceeding their 63.5-watt design requirement. The Apollo 14 unit deployed last month continues to operate after the passage of a complete lunar cycle with its extreme temperatures ranging from 291 degrees below 0° F. to 283 degrees above 0° F.

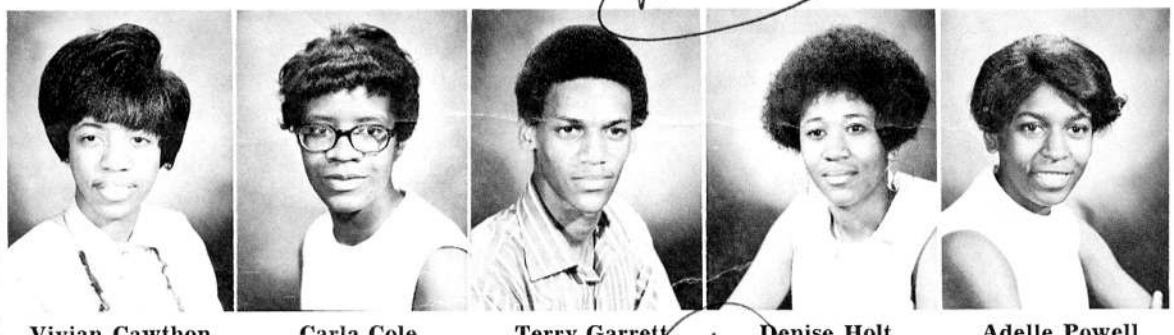
The first of the two units—deployed by the Apollo 12 astronauts —has already surpassed its one-year design life by three months, thereby allowing the simultaneous operation of two instrument stations on the moon.

The addition of the second nuclear - powered station has resulted in a bonus in the form of more refined data. When the scientific station previously recorded a moonquake, it was difficult to ascertain from which direction the event originated. With the two stations now recording this type of event from two places at the same time, correlations of the data can be made. A comparison of the times the signal is recorded at each station can result in a better estimate of the location of the event.

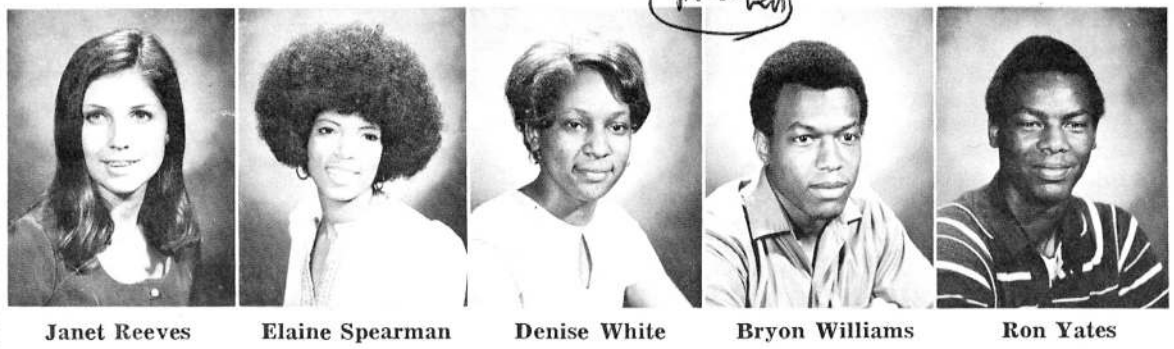
In addition it is expected that the data from two stations will tell us more about the depths of the crust of the moon than we have been able to discover from the data gathered from a single station.

A third nuclear-powered station will be deployed on the moon in July by the Apollo 15 astronauts.

Ten YOP Youths Here for Summer



Vivian Cawthon **Carla Cole** **Terry Garrett** **Denise Holt** **Adelle Powell**



Janet Reeves **Elaine Spearman** **Denise White** **Bryon Williams** **Ron Yates**

The ten young people pictured here are employed in the Paducah Plant for the summer under the Youth Opportunity Program.

This program is for persons between the ages of 18 and 21 who are high school graduates and college students who plan to continue their education in college, business or vocational schools.

This is the sixth year the Paducah Plant has participated in this program.

The students pictured above and their schools are: Vivian Cawthon, Murray State University; Carla Cole, Paducah Community College; Terry Garrett, Paducah Community College; Denise Holt, Tilghman High; Adelle Powell, Western Kentucky University; Janet Reeves, Paducah Community College; Elaine Spearman, University of Texas at El Paso; Denise White, Tilghman High; Byron Williams, Tilghman High; Ron Yates, Paducah Community College.

Boatwright and Copeland Share Top Honors at SW Point Golf Tournament

Alvin Boatwright and Frank Copeland shot 76's to share medalist honors in the third K-25 golf tournament of the current season, held at Southwest Point, Kingston. John Battle won handicap honors in the first division with a net 73.

Marvin McCarty had the low scratch score in the second division with a 79. Ted Bartlett had the lowest handicap score, a net 69.

John Keller's 90 was low scratch in the third division and Glen Luttrell's 34 handicap enabled him to score a net 62 to win handicap honors in this division.

Here are all the winners:

DIVISION I

Front Nine		Back Nine	
John Battle	36	H. E. Shaw	34
Ed Powell	36	Wes Hightower	35
Frank Copeland	37	Jack Cornett	36
C. G. Henley	37	Jim Mooney	36
C. F. Hale	38	Bob Nier	36
Gus Kosinski	38	C. S. Patton	36
W. L. McMahan	38	Jim Petruzzi	36
E. E. Edwards	39	John Battle	37
Lloyd Kahler	39	G. B. Boroughs	37
J. F. Kirchler	39	N. D. Byrd	37
John Noey	39	E. E. Edwards	37
R. M. Schilling	39	Gus Kosinski	37
Jim Winters	39	Bob Lynn	37
H. B. McBride	39	W. L. McMahan	37
		John Noey	37
		A. F. Poche	37
		R. M. Schilling	37
		E. T. Strunk	37

No. 9 Hole-In-One

H. E. Shaw ..... 12 ft. 9 in.
C. G. Henley ..... 16 ft. 4 in.

No. 17 Hole-In-One

H. Creswell ..... 10 ft. 9 in.
A. J. Kessing ..... 14 ft. 10 in.

DIVISION II

Front Nine		Back Nine	
D. F. Bennett	32	T. W. Bartlett	33
Marvin McCarty	33	Jim Chapman	34
G. R. Harper	35	D. M. Lang	34
R. O. Meyers	35	Marvin McCarty	34
W. M. Reynolds	35	P. F. Pasqua	34
T. W. Bartlett	36	E. C. Ellis	35
Jim Chapman	37	Bill Grumbach	36
J. A. Duff	37	J. A. Duff	37
D. R. Lawrence	38	C. D. Hawkins	37
Joe Price	38	A. L. Joiner	37
K. Sommerfeld	38	W. P. McEvoy	37
		C. E. Nunley	37
		W. M. Reynolds	37
		D. Zimmerman	37
		L. A. Studinger	37

No. 9 Hole-In-One

K. W. Sommerfeld ..... 14 ft. 9 in.
Jim Chapman ..... 19 ft. 9 in.

No. 17 Hole-In-One

Mark Crowell ..... 13 ft. 5 in.
Don Townsend ..... 13 ft. 10 in.

DIVISION III

Front Nine		Back Nine	
H. R. Kitchen	33	G. H. Luttrell	29
G. H. Luttrell	33	N. A. Teasley	33
J. L. Keller	36	W. S. Lenihan	34
R. B. Waters	36	Ron Campbell	36
R. L. Higgins	37	Carl Peterson	37
J. L. Petty	38	L. H. Sipe	37
Ron Campbell	39	Ray Rinehart	37
W. S. Lenihan	39	T. A. Angelelli	38
A. F. Payne	39	Jim Grisard	38
Sid Speckter	39	D. B. Johnson	38
		J. L. Keller	38
		P. H. Riddle	38
		R. B. Waters	38

No. 9 Hole-In-One

Sid Speckter ..... 16 ft.
Bob Higgins ..... 17 ft. 2 in.

No. 17 Hole-In-One

J. I. McKinley ..... 15 ft. 9 in.
M. J. Rafferty ..... 19 ft. 2 in.

NEXT TOURNAMENT

The fourth tournament will be held on the Cedar Hills Golf Club course at Martel, near Lenoir City, on Saturday, July 31. Starting times may be obtained from the Recreation Office on Monday, July 26.

June Uranium Shipment Totals 193,000 Pounds

Approximately 193,000 pounds of enriched uranium, valued at more than $10,800,000, was shipped from the Oak Ridge Gaseous Diffusion Plant under the Toll Enrichment Program during June.

The enriched uranium is for use in nuclear reactors located in Illinois, Pennsylvania and The Netherlands.

Additional requests for toll enrichment services were received during June from reactor facilities in Michigan, Sweden and West Germany. These requests call for the future delivery of 42,500 pounds of enriched uranium, valued at $1,872,000.

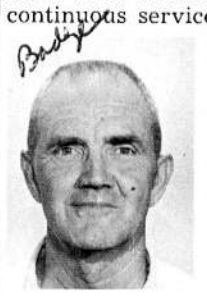
Ride wanted or will join car pool from North Clinton to Administration area, 7:45 a.m. to 4:15 p.m. Phone 3-3747, or Clinton 457-9066.

GREATEST REALITIES

"The greatest realities are physical and economic, all the subtleties of life come afterward." — Joyce Carol Oates

July Retiree

William E. Carson, operator in the Barrier Plant, Operations Division, has elected early retirement to be effective August 1. His continuous service date with Union Carbide is June 29, 1945. Before coming with us he worked at Alcoa and prior to that he was engaged in farming.



W. E. Carson

Carson is a native of, and attended schools in Madisonville. He is married to the former Kathleen McMurray, also from Madisonville. The Carsons have two children, William Clyde works in Atlanta and Linda Kay at the Carson home on Route 1, Lenoir City.

Carson says he plans to hunt birds, rabbits, ducks, do some more fishing and "write my memoirs."

Warrington Promoted To Planner-Estimator

Edwin P. Warrington

Edwin P. Warrington was promoted on July 1 from planner and estimator to a maintenance foreman in the Cascade Maintenance Department, Fabrication and Maintenance Division. He has been employed here since May 1946, first as a maintenance mechanic. Before coming with us he served four years in the U.S. Air Force.

Warrington was born in Hardin County, Tenn., and attended public schools in Savannah, Tenn. He is married to the former Ercie Lee Corn of Hendersonville, N.C. They have two children at home on Byington Road in the Karns Community; Deborah, 18, and Billy, 15.

Warrington's outside interests include fishing and gardening.

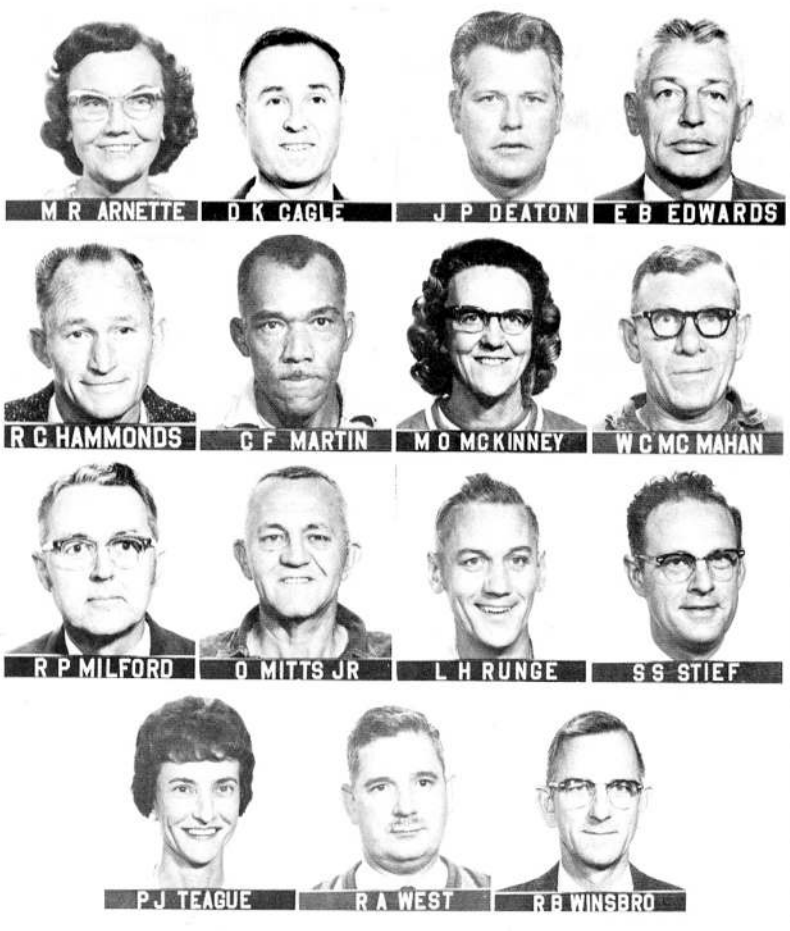
Paging Male Bowlers

A meeting will be held in the K-1002 Auditorium on Wednesday, July 28 at 2:00 p.m. to make plans for the forthcoming Fall and Winter bowling season. League play will start shortly after Labor Day, the first Monday in September.

All men interested in bowling are urged to attend this meeting. This includes men who want to join an existing team and those interested in forming a new team.

Mark this important meeting on your calendar and plan to attend.

25 Year Veterans



Oak Ridge Gaseous Diffusion Plant

ORGDP Editor . . . . . Harold Mayberry
extension 3-3097

K-25 CREDIT UNION—An exterior view of the new K-25 Credit Union building is shown at 170 Raleigh Road, west of the Grove Center area in Oak Ridge. The credit organization plans open house for all members Saturday, July 24, from 1 to 5 p.m.

Cost Reduction Is Past Half-Way Line

Fifty-eight percent of the Fabrication and Maintenance Cost Reduction Program has been attained in the first six months of calendar year 1971. The June session revealed that $247,000 had been saved toward the year's goal of $426,000 cost reduction.

The Chemical and Technical Maintenance Department under the direction of N. N. Landay are leading all of the other F & M groups in their cost reduction accomplishments.

Fabrication and Maintenance employees participating in the June session are — W. P. Burroughs, C. W. Butturini, F. W. Calhoun, J. R. Collins, J. P. Deaton, O. H. Dillon, E. Duff, A. F. Griffin, C. L. Gritzner, C. C. Hendrick, N. B. Hockman, K. L. Johnson, A. J. Krusen, N. N. Landay, J. Miller, R. D. Newman, R. L. Phillips, E. B. Queener, E. L. Sampson, H. R. Walls and A. J. White.

D. L. Burkett and H. T. Conner, Jr. of the Gaseous Diffusion Development Division also contributed to F & M's cost reduction achievements.

20 Years' Service

H. R. Ball, O. Cate, H. O. Crane, A. B. Currens, J. Duncan, R. L. Miller, B. D. Simcox, E. Slaughter Jr., S. J. Wheatley.

SAFETY SCOREBOARD

ORGDP
Has Operated
979,000 Safe Hours
Through July 15
Since last disabling injury on May 4

WATERCOLOR SPECIALIST—Sandy Whitaker, secretary in the Systems and Procedures Department, General Accounting Division, recently showed a collection of her watercolors at the Lenoir City Arts and Crafts Festival. The artist presented Governor Winfield Dunn one of her paintings during the showing. The festival, held annually in Lenoir City, attracted 103 artists and craftsmen exhibiting their works before a record-breaking crowd of 12,000.

Oak Ridge National Laboratory
ORNL Editor . . . . . Martha Goolsby
extension 3-6421

New Education Improvement Program Recognizes Active ORNL Participants

The Laboratory's Basic Education Improvement Program ended its fourth consecutive year of operation on June 29 with a program to recognize active participants.

Nineteen certificates were awarded to participating employees in accordance with their achievements. Presented were seven certificates for successful completion of one year's program, two certificates for successful completion of two year's program, five certificates for successful completion of three year's program and five certificates for successful completion of the High School Equivalency Examination.

One hundred forty-five employees have participated in the program during the past four years. Thirty-eight have graduated by successfully completing the High School Equivalency Examination. (These tests have been given at ORNL since 1947 in which time 189 persons have passed the examination.)

Student accomplishments over the closing academic year were beyond expectations, in that the minimum accomplishment was one grade level. These accomplishments are more significant when it is recognized that only two hours per week for a 30-week period were spent in the classroom by these employees. The rest was achieved on the employees' own time.

Receiving the High School Equivalency Certificate were LeRoy White (Health Division), Delbert Davis (Instrumentation and Controls Division), Raymond Brashier, Leroy Smith Jr., and Robert Winkle (all of Plant and Equipment Division).

Other certificates awarded were three year's participation, Hal Williams, Cecil Henline, Leroy West, and Arnold Ratliff (all of Plant and Equipment Division) and Paul Jude (Operations Division). Two-year certificates were presented to Charles Parks (Plant and Equipment Division) and Hugh Hackler (Operation Division). One-year certificates went to Wade McIntosh, Sammy Poston, Raymond Lawson and Robert Renfro (all of Plant and Equipment Division); and Margaret Cleveland, Carrie Wells and Virgil McKee (all of Biology Division).

1379-71

BEIP PARTICIPANTS awarded the High School Equivalency Certificate are (left to right) LeRoy White, Leroy Smith Jr., Delbert Davis and Raymond Brashier.

1378-71

RECEIVING CERTIFICATES for one-three years participation in the BEIP Program (left to right) are Robert Renfro, Hal Williams, Carrie Wells, Raymon Lawson, Virgil McKee.

James Flanary, Chemist, Dies July 5 in Knoxville

Sympathy to the family and friends of James R. Flanary (Chemical Technology Division) who died July 5 in Knoxville. Flanary, a chemist, joined ORNL in 1947. His death followed a lengthy illness.

Funeral services were held July 7 at Mann's Bearden chapel with interment at Highland Memorial Cemetery.

Flanary is survived by his wife Christine, two sons, James Jr. and Terrell of Knoxville and a daughter Mrs. Cynthia DiCarlo of Kansas City, Mo.

Company 20-25-30 Service

25 YEARS

Clarence J. Hochanadel, Chemistry Division, July 1.
Robert W. Holmberg, Chemistry Division, July 1.
Wilfred T. Ward, Reactor Chemistry Division, July 1.
William R. Rathcamp, Isotopes Division, July 3.
Cova P. Baker, Analytical Chemistry Division, July 3.
Francis E. Harrington, Chemical Technology Division, July 8.
John E. Francis Jr., Thermonuclear Division, July 8.
Edward E. McCombs, Isotopes Division, July 8.
William B. Howerton, Chemical Technology Division, July 10.
Walter G. Stockdale, Chemical Technology Division, July 15.
Cyrus Feldman, Analytical Chemistry Division, July 15.
Herbert G. Duggan, General Engineering Division, July 15.
Ray H. Winget, Plant and Equipment Division, July 16.
Thomas E. Cole, Reactor Division, July 17.
John C. Posey, Isotopes Division, July 17.
Marvin M. Murray, Analytical Chemistry Division, July 23.
Don E. Ferguson, Chemical Technology Division, July 23.
Carrie Wells, Biology Division, July 28.
Eveart W. Rosenbaum, Plant and Equipment Division, July 29.
George R. Wilson, Analytical Chemistry Division, July 31.

20 YEARS

Thomas A. Butler, Isotopes Division, July 21.
James D. Clapp, General Engineering Division July 2.
Richard A. Lorenz, Reactor Chemistry Division, July 2.
Leon Queener, Metals and Ceramics Division, July 2.
Earl V. Davis, Metals and Ceramics Division, July 9.
John M. Chilton, Chemical Technology Division, July 9.
Margaret Wallace, Plant and Equipment Division, July 10.
Nelda Gillum, Health Physics Division, July 12.
Clarence E. Guyer, Isotopes Division, July 4.
Harry M. Sartelle Jr., Information Division, July 16.
James V. Harris, Plant and Equipment Division, July 16.
Donald E. Horner, Chemical Technology Division, July 16.
Ronald L. Hickey, Chemical Technology Division, July 19.
Roy L. Heatherly, Inspection Engineering Division, July 23.
Violet Holt, Information Division, July 23.
Arthur J. Miller, Reactor Division, July 23.
Arthur Cardwell, Jr., Health Physics Division, July 23.
Robert J. Kedl, Reactor Division, July 26.
Harvey T. Houser Jr., Plant and Equipment Division, July 26.
Dale G. Noe, Health Physics Division, July 30.
Ralph Carter, Budget and Programming Division, July 30.
Hermon L. Lloyd, Plant and Equipment Division, July 30.
Raymond K. Adams, Instrumentation and Controls Division, July 30.

LOST AND FOUND

FOUND: Chrysler gas cap.

For information concerning lost and found items, contact Guard Headquarters, 3-6646.

Retiring

Glen Neely has had his eye on Florida retirement for a long time. He finally found the right spot last winter and will be taking early retirement August 1 to move to Sebring, Fla.

1454-71

Glen Neely

Neely has been a millwright in Plant and Equipment Division for 24 plus years. He plans to turn his woodworking hobby into a small business when he moves to Florida. While living in Oak Ridge he has built many cabinets, and lots of furniture. Recently he has started building grandfather clocks and says "I wish I had started building them sooner."

* * * *

John Enochs, shift captain in the Guard and Fire Department of Laboratory Protection Division will be taking normal retirement August 1. He has been at ORNL since 1948 and was at Y-12 for five years before coming to ORNL.

1458-71

John Enochs

He and "Miss Lily" (his wife's nickname) plan to see as much of the U.S. as they can. They have a 26-foot trailer and will soon be on the road with it. Enochs also says he plans to do some work as long as it doesn't interfere with enjoying his retirement days and his traveling.

* * * *

William Scarbrough, chief store attendant, Plant and Equipment Division, is retiring August 1 after 24 years and seven months at ORNL.

He lays claim to having spent as many or more years in the Bethel Valley as anyone else. In addition to working here almost 25 years, he was reared here. His old home site was near the rock quarry on Bethel Valley Road. Scarbrough will be at home on the small farm he owns in Concord. He plans to continue gardening, do some remodeling, enjoy his grandchildren and take a few trips.

1457-71

Wm. Scarbrough

* * * *

Thomas Watson, design engineer in General Engineering Division, says he is a "nut on traveling." And right now you will find him packing for the trip he and his wife are taking to Australia and the Orient after his August 1 retirement. His trip will include Japan, Singapore, Hong Kong, the East Indies, New Zealand, Tahiti, Bora Bora and Hawaii.

1456-71

Thomas Watson

Watson has been at ORNL for 23 years and 10 months. He plans to move to his farm in Pinnacle, North Carolina, where he has two coveys of quail. From there he plans fishing, hunting, travel and loafing.

More Honors Are Taken By ORNLers' Off-Springs

William Kyle Prater, son of Willis Prater (Isotopes Division) has been named the outstanding undergraduate student in the University of Tennessee, chapter of the Phi Sigma Society, an honor society for students majoring in biological science.

W. K. Prater

Prater, who graduated in June with the B.S. degree in Liberal Arts, with a major in zoology, also had the highest academic standing of students majoring in the biological sciences. He was a member of Alpha Epsilon Delta and was an invited member of Phi Beta Kappa as a junior, an honor seldom achieved before the senior year.

Prater will enroll in the UT Medical Units in Memphis this fall.

* * *

Donna Gilbert, daughter of Elmer L. Gilbert (Operation Division), is the recipient of a fellowship for graduate study in biostatistics from Vanderbilt University. She is also attending the University of California at Berkeley on a similar fellowship this summer.

Miss Gilbert

Miss Gilbert is a 1971 graduate of David Lipscomb College, where she majored in mathematics.

Lab's DiCarlo Is Selected K. of C. Leader for Year

Francis A. DiCarlo (Instrumentation and Controls Division) has been elected Grand Knight of the Oak Ridge Knights of Columbus, Council 3175, and will head the Council this fiscal year.

DiCarlo

DiCarlo, a 4th Degree Knight of the Monsignor F. D. Grady General Assembly — Fourth Degree Knights of Columbus of Knoxville, is a part-owner of the Alexander Motor Inn and is active in the business community of Oak Ridge. At the Laboratory he is on the technical operating staff of the Van de Graaff Laboratory.

EAR WAX -- Mysteries and Miseries

By T. A. LINCOLN, M.D.

Ear wax, properly called cerumen, is formed by 1,000 to 2,000 ceruminous glands located in a circular band in the outer or cartilaginous part of the ear canal. In the deeper part of the canal which goes through the temporal bone there are no glands. This circular band suggests that ear wax must play a part in protecting the delicate ear drum. Just precisely how is still not clear.

It will surprise most people to learn that ear wax is really sweat! The ceruminous glands are identical with the apocrine sweat glands located under the arms, in the axillae. The ceruminous glands, like the apocrine sweat glands, do not function until puberty and are influenced by strong emotions. The eccrine sweat glands which regulate body temperature are not found in the ear but are uniformly distributed throughout the rest of the skin.

Dr. Lincoln

The ceruminous glands retain their secretion in a reservoir formed in their widely dilated ducts. When the proper stimulus occurs, surprisingly large quantities can be poured into the canal.

A similar situation occurs with the apocrine glands in the axilla. Many patients experience profuse axillary sweating during the tension and embarassment of a physical examination. During such circumstances few patients are aware of wet ears, but laboratory studies have clearly shown that subjects who were fearful about an ear examination often had wet ears. Later when they got used to the examination, they no longer responded.

Ear Sweating Stimuli

Other stimuli which cause ear "sweating" are pain, irritation and the administration of certain drugs. The most potent drug is adrenalin. Since adrenalin is released into the blood stream by the adrenal glands during fright or anger, one wonders if wet ears occur after a near miss in what looked like a certain auto accident. Does one get wet ears during a family fuss? Under chronically stressful conditions, the wax glands are sometimes hyperactive. Itching occurs which is relieved by digging at the ears and an infection frequently follows.

The secretion or "sweat" of the ceruminous gland in the ear appears on the wall of the canal as white watery droplets. If undisturbed, it slowly dries to form a sticky semisolid. It usually mixes with the oil secreted by the sebaceous glands. In time it becomes a yellowish to brown "honey" colored wax-like substance.

In many people wax on the surface dries and apparently drops out of the ear during sleeping. There is no mechanism to move it out rather than the movements of the lower jaw during eating, talking or yawning. This self cleaning mechanism is extremely slow. Powdered charcoal blown into the ear will still be there six to eight months later unless there has been some effort to clean it out.

"Fly Paper"

Cerumen helps protect the ear from insects. It is sort of a "fly paper." It also traps other particles of dirt which might otherwise go deeper into the canal. Ear wax is a relatively impervious water repellant secretion and protects the skin of the ear from excessive moisture.

Cerumen does not appear to have any outstanding antibacterial activity. However, recent studies of immunoglobulins and lysozymes suggest that, at least in some people, it may have special protective properties other than its water proofing effect.

Swimming frequently produces a douche-like action which removes the protective coating. Often in an effort to get water out of one's ears, a person will stick his little finger in as far as he can and vigorously shake it. Such an action only increases the douche effect. Even after the water comes out, a little swelling and maceration remain which often cause itching.

Hot, humid weather also often causes maceration and itching. In an attempt to relieve the itching all manner of unclean objects are introduced into the canal. Once the defenses of the skin are impaired, bacterial infection occurs easily. Pathogenic

(Continued on Page 8)

MINUTEMAN FLAG PRESENTED—The Oak Ridge Gaseous Diffusion Plant accepts the U. S. Treasury Department's treasured Minuteman Flag showing that the plant is participating more than 50 percent in the payroll savings plan. Holding the flag, from left, are Norvell S. Rose, Ray C. Morvant, Robert G. Jordan, ORGDP Superintendent; E. Edward Foland, and Ken W. Sommerfeld, who headed the successful drive recently in ORGDP. Rose, Morvant and Foland are with the Savings Bond Division of the U. S. Treasury Department. A host of interested ORGDP employees witnessed the presentation.

SPORTS NOTES

GOLF — ORNL

Golfers, the next ORNL tournament will be held July 31 at Whittle Springs. Call for tee-off times on Wednesday, July 28 after 1 p.m. The phone numbers are 3-6823 and 3-6928.

* * *

Mrs. Della Culler, wife of ORNL Deputy Director Floyd Culler, believes in celebrating her silver anniversary in a sporting way. Playing with her husband and son Jim on July 3 at Oak Ridge Country Club, she shot a hole-in-one on the 155 yard number 8 hole using a five wood.

* * *

J. D. Hudson drove in a 74 to win the June 26 golf tournament at Wallace Hills. Other low scorers were Herb Buffington at 75, John Cornelius at 77, David Laughlin, Kurt Lannom and Walt Cox at 78, and John Bryson at 79. Division II Scratch honors went to J. T. Robinson, John Martin and Bob Toucey. The three best Division II Handicap scores were carded by H. V. Klaus, John Van Cleve, and Paul Hudson. Division III Scratch leaders were Bob Schill, P. R. Long and John Crockett. Rounding out the honors in Division III Handicap were Dean Hackler, Joe Rich and Bob DeBakker.

* * *

SOFTBALL — ORNL

At **News** deadline the Braves at 12-0 hadn't been touched. Closely pursuing are Computes and Biology.

* * *

Greg Sergent, 14-year-old son of John Sergent (Personnel Division), pitched a no-hitter in the Sandy Koufax League July 6 against the Powell Braves. He struck out 16 batters and his Karns team won the game 4-1.

* * *

FISHING — ORNL

Look who's been fishing! Following are winners in each category for the second quarter Fishing Rodeo — LeRoy Dutton, largemouth bass; Danny Plaster, smallmouth bass; W. K. Donham, bream; R. G. Shooster, crappie; W. H. Campbell, hybrid and rock fish; P. S. Lee, rough fish; G. E. Pierce, sauger; Jack Banks' son, striped bass; Ray Brashier, trout; and Arnold Beets, walleye.

* * *

GOLF—Y-12

The Crowder - McDonald team still leads the Melton Hill Golf League in the stiff 14-team race. Bob Carmack fired a 33 recently for a low score.

Bill Mee Jim Vance

Bill Mee and Jack Vance tied for honors in the June tournament at Whittle Springs Golf Club, both carding a one-under par 71.

(Recreation Director Emmett Moore says two clubs . . . a wood and an iron . . . were turned in after the tournament and the golfer-loser may reclaim by identifying them.)

July's race is set at Southwest Point, Kingston, for Saturday, July 24. Application appeared in the July 1 newspaper.

* * *

SOFTBALL — Y-12, K-25

Mid-July sees the league still locked in deadly combat, with three teams still boasting a record with only one loss chalked against them. Breathing down each other's necks are the Buccaneers, the K-25 Colts and the Y-12 Eagles. (The Gashouse Gang and the All Stars have suffered only two losses.)

* * *

HOLE-IN-ONE!

Virgil Lovett recently accomplished the impossible! He fired a hole-in-one on the South Hills golf course in Oak Ridge. Lovett scored the ace on number five hole, a 187-yarder, par three. He used a four iron for the magic feat which was witnessed by fellow Y-12ers David Ellis and Bryan Bruce.

New Boating Laws

Summer time is pleasure boating time. But fun can be marred if adequate safety equipment is not on board your boat.

Tennessee law requires that any undocumented vessel propelled by machinery of 5 H.P. and over and all sailboats must be registered.

Minimum equipment requirements for Class A boats (under 16 feet) are valid registration certificate on board, registration number on both sides of bow, life preserver for each person aboard, fire extinguisher (one B-1 for inboard or open boats in which inflammable gases may accumulate), lights (combination red and green light on bow, white horizon light aft), ventilation on inboard boats, and flame arrestor on inboard boats.

Class 1 boats (16 to under 26 feet) to meet the minimum equipment requirements must have all the same equipment required for Class A boats plus a whistle, whether it be mouth, hand or powered horn.

These requirements as well as requirements for larger boats, safety tips and rules on the waterways are available in a brochure entitled "Boating Safety Guide." For your brochure call 524-2597 or write the Tennessee Game and Fish Commission, State Office Building Annex, 618 Church Avenue, Knoxville, 37902.

ALL CARBIDE SPORTS

June winners in the All Carbide Skeet League were Joe Comolander, Y-12, who scored a perfect combination of 50.00. ORNLers Fred Welfare and Vern Raaen followed with scores of 48.964 and 48.556. (Y-12er B. S. Denton came in third, but was under penalty because of a previous win.)

* * *

George Reimann of ORNL won the fifth match of the All Carbide High Power Rifle League with a blistering 481 out of 500. Jack Huff of Y-12 was second with a 470, and close behind was Don Kiplinger of ORNL with a 469.

PITY FOR AMERICANS

"American institutions — which are here taken for granted, like oxygen — are the subject of our wildest dreams in Eastern Europe. I have certain pity for the Americans, because they do not know how to cherish what they have, and what others know they have."
—Leopold Tyrmand

Sundberg Named Assistant PR Head

David A. Sundberg

David A. Sundberg, Director of ORNL Public Information, has been appointed Assistant Director of Public Relations for the Nuclear Division. He will continue to direct the ORNL public information activities.

Sundberg joined ORNL in 1967 to initiate the **ORNL Review** and became director of Public Information in October of 1967. Previous to joining ORNL he was editor of **Nuclear News** and was a member of the public relations staff of Los Alamos from 1951-1965.

He is a member of the Public Information Committee of the American Nuclear Society and the Public Information Chairman of the local chapter.

SUPER CONCRETE

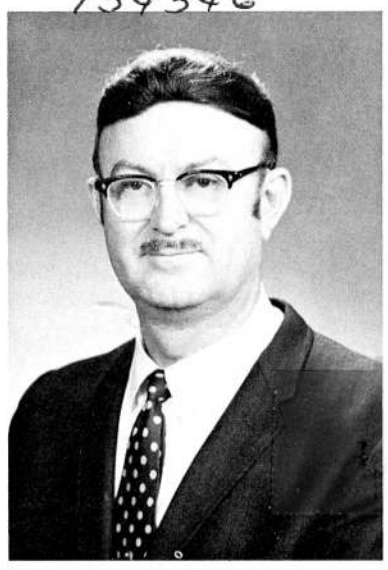
A super concrete which is four times stronger than ordinary concrete has been developed through a radiation process using cobalt-60. It combines ordinary concrete with a plastic which its developers call "concrete polymer." It's claimed to be highly resistant to abrasion and to freeze-thaw damage, and nearly 100 percent resistant to corrosion.

COMMUNITY
August 15

A reunion of former teachers and students of the Old Robertsville High School during the years 1939-1942 will be held Sunday, August 15 between noon and 5 p.m. at the Clinton Jaycee Park.

A picnic lunch will be served at 1 p.m. Each family is requested to bring lunch. Soft drinks will be furnished.

Y-12 Scientist Discusses Clean Room Application to Civil Defense Agency



James M. Schreyer

A Union Carbide scientist has been invited to the Office of Civil Defense in Washington, D.C., July 26, to discuss the possible application of the ultra-clean room system for protection against radioactive fallout, bacterial and germ warfare and poisonous gases.

James M. Schreyer, who heads the Chemistry Development Department at the Oak Ridge Y-12 Plant, will suggest the use of such systems in homes, public buildings and fallout shelters as a means of protecting civilians outside a nuclear blast area.

Y-12 has used such ultra-clean room systems as sites for preflight cleaning of the geological sample collecting equipment used in Apollo moon landing missions. An ultra-clean room is an area protected by absolute filters and an airflow system that provides numerous air changes per hour. The system, originally developed about 10 years ago at another Atomic Energy Commission installation in New Mexico, has been modified in recent years at the Y-12 Plant.

Such systems presently are being studied by medical authorities for use in hospital operating rooms, contagious disease wards and waiting or treatment rooms, and several firms are experimenting with methods of manufacturing prefabricated clean room modules.

A clean room system proposed by Schreyer for civil defense use would be operated on normal house current during normal times and be an aid to the occupants in reducing contagious diseases and respiratory problems, in cutting laundry bills and relieving the housewife of many cleaning jobs. In the event of a nuclear fallout emergency, the system would operate on gasoline or diesel power and offer significant protection against contamination.

Traffic Signals Changed On Oak Ridge Turnpike

Traffic signals on the Oak Ridge Turnpike between Illinois Avenue and Georgia Avenue have been altered to improve the flow of traffic. The major change was the reduction of the amount of time for the yellow or caution light from the six-second interval to a three-second one. In addition, the amount of green time for various side streets changed slightly.

These changes, recommended by the State Highway Department, were designed to increase the capacity of the Oak Ridge Turnpike, establish a 35 mile-per-hour traffic progression for vehicles traveling the Turnpike and make local signals conform to the national standards of highway safety.

Dr. Lincoln

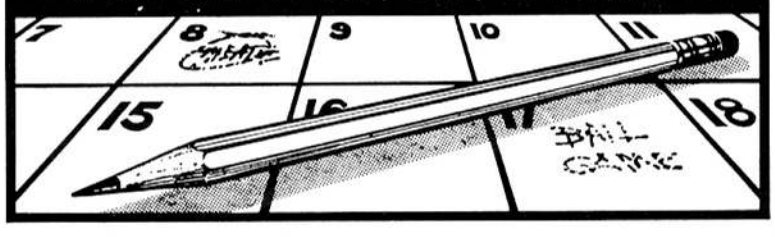
(Continued from Page 7)

strains of Pseudomonas bacteria can be put into a healthy ear and no infection will occur. Put into an injured or moist ear, a stubborn infection usually occurs.

Ear wax is a genetic marker just like blood type. About 80 percent of Caucasian and a somewhat higher percentage of blacks have wet ear wax while about 20 percent have a sparse, dry type. Orientals and American Indians have predominantly the dry type. The wet type is a dominant and the dry type a recessive trait. Those with dry ear wax also have less body odor due to fewer apocrine glands.

Ear wax which completely plugs the canal can impair hearing. A partial obstruction can trap water which gets into the ear during swimming or bathing. Careful irrigation, preferably done by a nurse, is usually effective in removing the wax. The adage, "Never put anything smaller than your elbow into your ear" still applies. Unless it obstructs the canal, ear wax is an important defensive mechanism and should be left alone. Swimmers who have recurring difficulty should remember that the human ear was not designed for underwater activities!

CALENDAR OF EVENTS



PADUCAH

July 26

Ladies Golf League: Fifth week of a ten-week schedule. Other dates of play—August 2, 9, 16, 23 and annual dinner on August 30.

July 31

Family swimming: Noble Park, 9 a.m. This is the last day of the swimming program.

TECHNICAL

July 23

Physics Division Seminar: "The 1971 Atomic Mass Adjustment," N. B. Gove, Mathematics Division. East Auditorium, Building 4500N, 3 p.m.

July 27

ORAU Medical Division Staff Seminar: "Sequential Testing," Dr. Marvin Kastenbaum, Washington, D. C. Medical Division Main Conference Room, East Vance Road, 4 p.m.

ORAU-ORNL Summer Lecture Program: "Civil Defense," Eugene P. Wigner. American Museum of Atomic Energy, Jefferson Circle, 8 p.m.

July 28

Metals and Ceramics Division Seminar: "High Fluence Radiation Damage," K. Farrell. East Auditorium, Building 4500N, 2:30 p.m.

July 29

Solid State Division Seminar: "Neutron Inelastic Scattering in the Ising System $FeCO_3$," Douglas Wrege, Georgia Institute of Technology. Conference Room, Building 3025, 10 a.m.

July 30

Reactor Division Seminar Series on Reactor Technology: "Current Programs of the Reactor Division," Sam Beall. Large Conference Room, Building 9204, Y-12 Plant, 3 p.m.

Biology Division Seminar: "Antigen Localization and Cell Movement with Reference to Germinal Centers," Judith Mitchell, The Walter and Eliza Hall Institute, Royal Melbourne Hospital, Victoria, Australia. Large Conference Room, Building 9207, 12:15 p.m.

August 3

ORAU-ORNL Summer Lecture Program: Panel on "Radiation Standards and the Population," Roger Cloutier, Moderator. American Museum of Atomic Energy, Jefferson Circle, 8 p.m.

August 9-10

Reactor Chemistry Division Information Meeting: Central Auditorium, Building 4500N, 9 a.m.

August 11

Metals and Ceramics Division Seminar: "Inventions and Reporting — Part of Your Professional Responsibility," Martin J. Skinner, Patent Section of Law Department. East Auditorium, Building 4500N, 2:30 p.m.

FOREIGN STUDENTS VISIT—Some 41 students, representing 21 countries, visited the Training and Technology project in the Oak Ridge Y-12 Plant recently. The young scholars had just completed their year's stay in this country and all were embarking to their native shores. The visit was coordinated by R. T. Lovell, head of the AFS Norris chapter. AFS provides funds for the exchange of students. The student-to-student program costs about $950, and is one of the activities of the local United Nations Committee.